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FIG. 1.

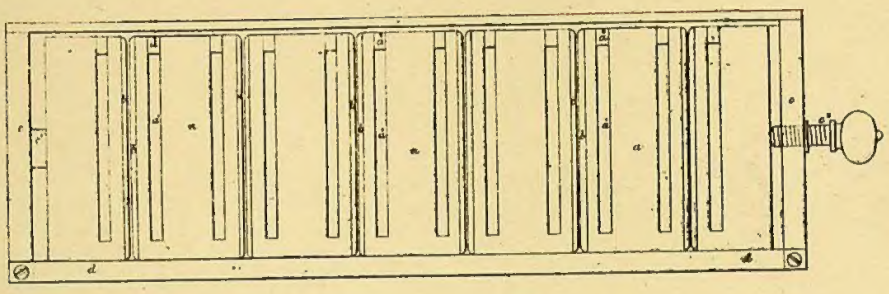


FIG. 2.

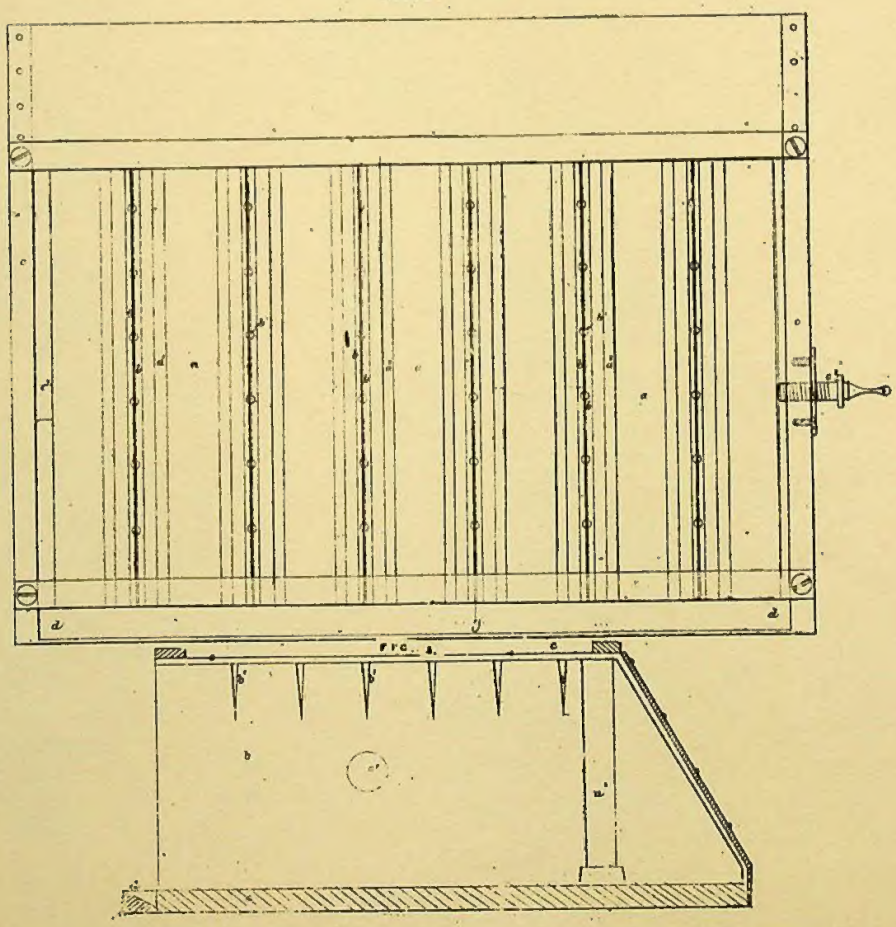
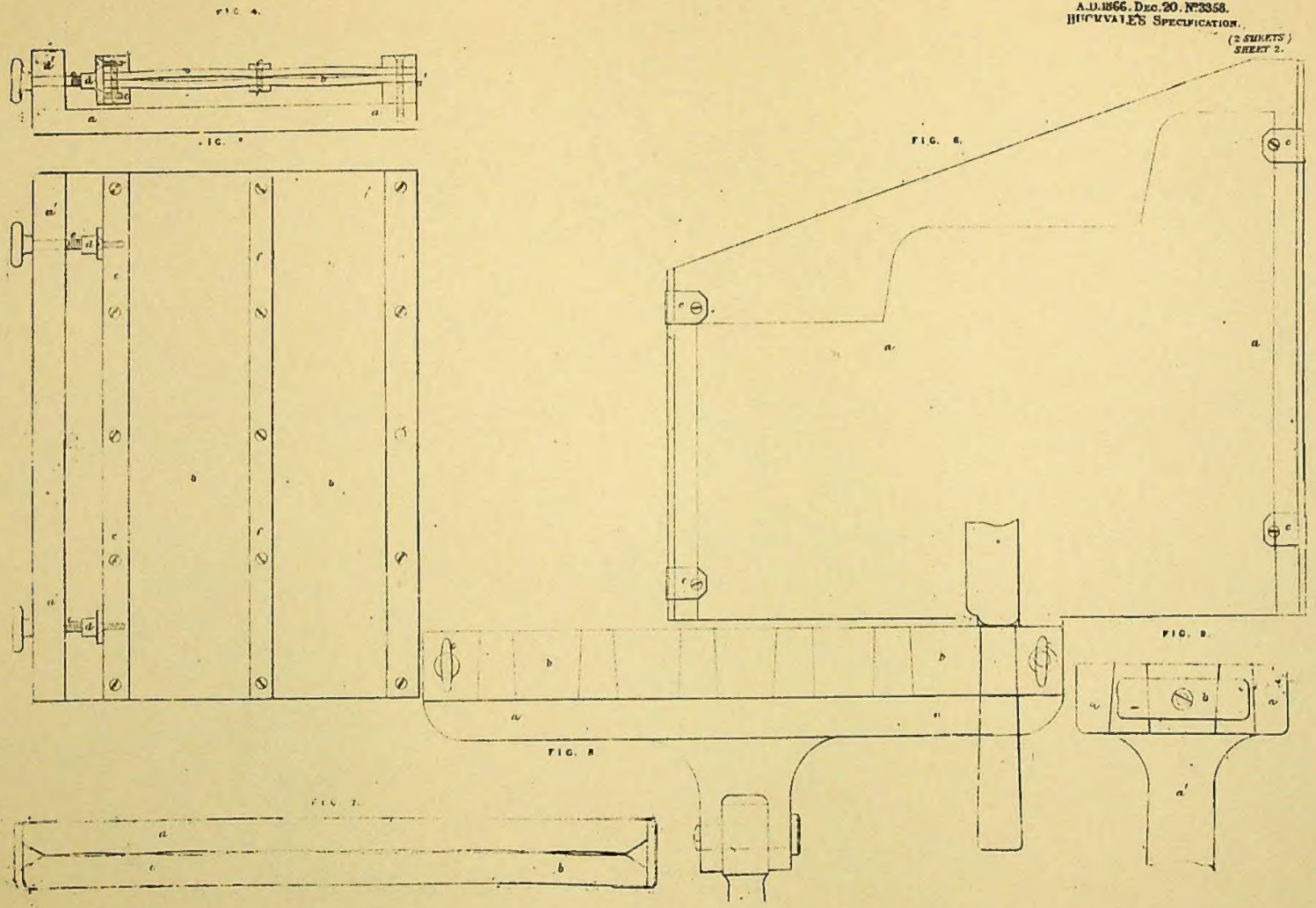


FIG. 3.



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A.D. 1866, *20th December.* N° 3358.

Apparatus for Cleaning Knives.

LETTERS PATENT to Thomas Huckvale, of 1, Emerson Terrace, Forest Hill, in the County of Kent, for the Invention of "IMPROVEMENTS IN APPARATUS FOR CLEANING KNIVES."

Sealed the 7th April 1867, and dated the 20th December 1866.

PROVISIONAL SPECIFICATION left by the said Thomas Huckvale at the Office of the Commissioners of Patents, with his Petition, on the 20th December 1866.

I, THOMAS HUCKVALE, of 1, Emerson Terrace, Forest Hill, in the County of Kent, do hereby declare the nature of the said Invention for "IMPROVEMENTS IN APPARATUS FOR CLEANING KNIVES," to be as follows:—

This Invention has for its object improvements in apparatus for cleaning knives. I employ a box or case containing a number of rubbers each consisting of a rectangular strip of wood or other material somewhat longer and wider than the knife blades, and of convenient thickness. These rubbers in order to give them a slight elasticity are cut almost through with a saw from one edge towards the other, so that each rubber is nearly divided into two similar pieces of half the thickness. The rubbers thus prepared are covered with woollen cloth or other fabric to hold the sand or polishing powder, and they are arranged side by side in the box or case, already mentioned, in which there is at the centre of one side a projecting peg or stud for the end rubber to bear against, whilst at the centre of the other side of the box or case is a screw which can be caused to press on the rubber next it so as to squeeze all

the rubbers together. At the front the box is open to admit of the knife blades being thrust in between the rubbers, and the screw is then tightened until a sufficient pressure of the blades is obtained, and then the knives are cleaned by rubbing them to and fro, and up and down between the rubbers. Where it is desired to clean several knives at the same time I clamp their handles together after their blades have been introduced between the rubbers by shutting them between two boards held together by screws or otherwise, and then the clamp with all the knives in it is worked to and fro and up and down, as before mentioned. If the knives are not numerous this motion may be given by hand, but where many knives have to be cleaned at the same time I give the motion to the clamp by a crank and connecting rod, or by other mechanical means.

In some cases in place of a box containing rubbers, as above described, I employ two belts of leather or other material strained tight, resting the one on the other and attached together at intervals. The sand or polishing powder is placed between the two belts, and the knife blades are introduced between the belts and rubbed to and fro either singly by hand or several held in a clamp, as before mentioned, and this clamp where a large number of knives are to be cleaned at one time may receive its motion from a crank and connecting rod, or by other mechanical means; or in place of belts two rigid boards may be employed, held together by springs or weights and with recesses between them to fit the blades. The knife blades are worked in and out of these recesses, which are kept supplied with sand or polishing powder by means of holes bored through the upper board.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said Thomas Huckvale in the Great Seal Patent Office on the 20th June 1867.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, THOMAS HUCKVALE, of 1, Emerson Terrace, Forest Hill, in the County of Kent, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Twentieth day of December, in the year of our Lord One thousand eight hundred and sixty-six, in the thirtieth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Thomas Huckvale, Her special licence that I, the said Thomas Huckvale, my executors, administrators, and assigns, or such others as I,

the said Thomas Huckvale, my executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "IMPROVEMENTS IN APPARATUS FOR CLEANING KNIVES," upon the condition (amongst others) that I, the said Thomas Huckvale, executors or administrators, by an instrument in writing under my, or their, or one of their hands and seals, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said Thomas Huckvale, do hereby declare the nature of the said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement thereof, that is to say:—

This Invention has for its object improvements in apparatus for cleaning knives. I employ a box or case containing a number of rubbers each consisting of a rectangular strip of wood or other material somewhat longer and wider than the knife blades and of convenient thickness. These rubbers in order to give them a slight elasticity are cut almost through with a saw from one edge towards the other, so that each rubber is nearly divided into two pieces. The rubbers thus prepared may be covered with woollen cloth or other fabric to hold the sand or polishing powder, and they are arranged side by side in the box or case already mentioned, in which there is at the centre of one side a projecting peg or stud for the end rubber to bear against, whilst at the centre of the other side of the box or case is a screw which can be caused to press on the rubber next it so as to squeeze all the rubbers together. At the front the box is opened to admit of the knife blades being thrust in between the rubbers, and the screw is then tightened until a sufficient pressure on the blades is obtained, and then the knives are cleaned by rubbing them to and fro and up and down between the rubbers.

Figure 1 is a front view, Figure 2 a plan, and Figure 3 a longitudinal section of apparatus thus arranged.

a, a, are rectangular strips of wood with saw cuts a^1, a^1, formed in them which are filled at their upper ends by narrow fillets a^2, a^2; b, b, are surfaces of woollen cloth or other material applied to these blocks and attached by means of glue; c, c, is a box or case for receiving the rubbers; the outer

rubber at one end rests against a stud c^1 on the end of the box, and the outer rubber at the other end receives the pressure of the screw c^2 passing through the box at its other end, or several screws may be used in place of a single screw. The rubbers are grooved at a^3, thus their rubbing surfaces are made somewhat shorter than the blades of the knives they are required to clean, so that the polishing powder may not accumulate between them at their ends. The knife blades are inserted between the covered surfaces b, b, of the blocks a, and are worked in and out and up and down. The polishing powder is applied at the top of the blocks and works down between the surfaces b, b, by the guide channels b^1 formed for it. The upper part of the case c receives a cover, which however is removed in Figure 2. d is a trough at the front of the apparatus to receive any polishing powder which may escape at the front; it may be emptied from time to time and the powder passed back again between the rubbers. Any powder which escapes from the rubbers at the back may be removed by a trap provided for the purpose, but not shewn in the Drawings, and passed back again between the rubbers. When it is not required to give a fine polish to the blades, but only to clean them rapidly, the woollen cloth may be omitted and the wood itself employed as the rubbing surface.

In some cases in place of a box containing rubbers, as above described, I employ two belts of leather or other material strained tight, resting the one on the other and attached together at intervals. The sand or polishing powder is placed between the two belts, and the knife blades are introduced between the belts and rubbed to and fro. Figure 4 is an end view, and Figure 5 a plan of this arrangement. a, a, is a board with two projecting flanges a^1, a^1, one at each edge; to one of these flanges the canvas sheets b, b, are fixed by screwing down a clamping strip over them. The outer edges of the canvas are held between strips c, c, to which are fixed screw sockets d, d, and these receive screws e, e, passing through the other flange a^1 and serving to strain the canvas; other clamps f secure the two surfaces of canvas at intervals the one to the other and form a number of compartments for the knife blades; one such clamp only is shewn in the Drawing, but there may be several. The polishing powder is introduced at the end between the canvases, and the knife blades are drawn in and out and moved sideways between them.

In order to prevent the canvas being worn by the knives rubbing, strips of wood, or it may be of woollen cloth, or other material, may be fixed to the inner surfaces of the canvas; or in place of belts two rigid boards may be employed held together by springs or weights and with recesses between them to fit the blades. The knife blades are worked in and out of these recesses, which are kept supplied with sand or polishing powder. Figure 6 is a plan,

and Figure 7 is a front view of this arrangement; it consists of two boards *a* and *b*, held together by clips *c*, *c*, and grooved, as is shewn, to form recesses for the knife blades. One of the boards is cut away, as is shewn by the dotted lines, so that the rubbing surfaces may not exceed the knife blades in length. The edges are enclosed on all sides but the front, and any powder that works out at the inner ends of the rubbing surfaces is shaken out of the apparatus from time to time by channels *d*, *d*, left for it on each side; weights are applied on the top of the boards when in use.

Where it is desired to clean several knives at the same time I clamp their handles together after their blades have been introduced between the rubbers by shutting them between two boards held together by screws or otherwise, and then the clamp with all the knives in it is worked to and fro and up and down, as before mentioned. If the knives are not numerous this motion may be given by hand, but where many knives have to be cleaned at the same time I give the motion to the clamp by a crank and connecting rod, or by other mechanical means. Figure 8 is a plan of such a clamp. *a*, *a*, is the lower board of the clamp with recesses in it to fit the knife handles; *b* is a board resting on the top of the knife handles and drawn down towards the board *a* so as to nip them by the clamping screws *c*, *c*; *d* is a connecting rod jointed to the board *a* and receiving a reciprocating motion of an inch or thereabouts from a crank.

Figure 9 is a small clamp to hold two knives; in this case for the upper board a turnbutton *b* is substituted, and the lower board *a* has a handle a^1 which is grasped together with the knife handles upon it.

In witness whereof, I, the said Thomas Huckvale, have hereunto set my hand and seal, this Twentieth day of June, in the year of our Lord One thousand eight hundred and sixty-seven.

THOMAS HUCKVALE. (L.S.)

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